

SAMPLING RESULTS

Over the course of this year the Walpole Water Department conducted more than 500 water quality tests looking for bacteria, nitrates, organics, and other contaminants, such as total trihalomethanes. We have compiled the table below to show what substances were detected in our drinking water during 2016. Even though all of the substances listed below are under the Maximum Contaminant Level (MCL) set by the U.S. EPA, we feel that it is important that you know exactly what was detected and how much of the substance was present in the water.

The state allows us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data is included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

| Substance (Units) | Year Sampled | MCL MRDL | MCLG (MRDLG) | Highest Amount Detected | Range (Low-High) | Violation | Typical Source |
|-----------------------------------|--------------|----------|--------------|-------------------------|------------------|-----------|--|
| Simazene (ppb) | 2016 | 4 | 4 | 0.16 | .12 - .16 | No | Herbicide Runoff |
| Barium (ppm) | 2016 | 2 | 2 | .008 | .007 - .008 | No | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits |
| Chlorine ⁴ (ppm) Total | 2016 | [4] | [4] | 1.40 | 1.36 – 1.49 | No | Water additive used to control microbes |
| Chlorine ⁴ (ppm) Free | 2016 | [4] | [4] | 0.07 | .07 – .08 | No | Water additive used to control microbes |
| Fluoride (ppm) | 2016 | 4 | 4 | 1.21 | .07 – 1.21 | No | Water additive which promotes strong teeth |
| Nitrite (ppm) | 2016 | 1 | 1 | 0.17 | ND – .17 | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| Nitrate (ppm) | 2016 | 10 | 10 | 1.2 | 0.49 – 1.2 | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| Perchlorate(ppb) | 2016 | 2 | NA | 0.15 | 0.12 - 0.15 | No | Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks and explosives |

Table Definitions:

AL (action level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

DBPR Disinfection By Products Rule

MCL (maximum contaminant level): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

MCLG (maximum contaminant level goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND: Substance not detected

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

90th Percentile: Out of every 10 homes sampled, 9 were at or below this level.

SMCL: These standards are developed to protect the aesthetic quality of drinking water and are not Health based.

The Benefits of Fluoridation

Fluoride is a naturally occurring element in many water supplies in trace amounts. In 2013 we adjusted the level to 0.7 parts per million. At this level, it is reportedly safe, odorless, colorless, and tasteless. Our water system has been providing this treatment for many years to improve oral health in children. There are over 3.9 million people in 140 Massachusetts water systems and 184 million people in the U.S. who reportedly receive the health and economic benefits of fluoridation.

STAGE 2 DBPR³

| | MCL MRDL | MCLG (MRDLG) | Date | Location | Range (Low-High) | LRAA | Violation | Typical Source |
|--|----------|--------------|----------------|------------------|------------------|------|-----------|---|
| TTHMs [Total Trihalomethanes] (ppb) | 80 | N/A | 2016 Quarterly | Main Street | 29 -51 | 38 | No | By-Product of Drinking Water Disinfection |
| | 80 | N/A | | Ridge Road | 33-48 | 42 | No | |
| | 80 | N/A | | High Street | 24-39 | 29 | No | |
| | 80 | N/A | | Boston Prov. Hwy | 18-24 | 22 | No | |
| Haloacetic Acids [HAA] (ppb) | 60 | N/A | 2016 Quarterly | Main Street | 17 -44 | 28 | No | By-Product of Drinking Water Disinfection |
| | 60 | N/A | | Ridge Road | 17-33 | 26 | No | |
| | 60 | N/A | | High Street | 15-20 | 18 | No | |
| | 60 | N/A | | Boston Prov. Hwy | 10-20 | 14 | No | |

Tap water samples were collected for lead and copper analysis from sample sites throughout the community

| Substance (Units) | Year Sampled | Action Level | MCLG | Amount Detected (90 th Percentile) | Sites Above AL/Total Sites | Violation | Typical Source |
|-------------------|--------------|--------------|------|---|----------------------------|-----------|--|
| Copper (ppm) | 2015 | 1.3 | 1.3 | 0.110 | 0/30 | No | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives |
| Lead (ppb) | 2015 | 15 | 0 | 2.0 | 0/30 | No | Corrosion of household plumbing systems; Erosion of natural deposits |

SECONDARY SUBSTANCES

| Substance (Units) | Year Sampled | SMCL | MCLG | Highest Amount Detected | Range (Low-High) | Violation | Typical Source |
|------------------------------------|--------------|------|------|-------------------------|------------------|-----------|--|
| Manganese (ppb) | 2016 | 50 | N/A | 13 | ND - 13 | No | Naturally Occurring Mineral |
| Chloride (ppm) | 2016 | 250 | N/A | 150 | 78 -150 | No | Runoff/leaching of natural deposits |
| Sulfate (ppm) | 2016 | 250 | N/A | 26 | 8.3 -26 | No | Runoff/leaching of natural deposits; Industrial wastes |
| Total Dissolved Solids (TDS) (ppm) | 2016 | 500 | N/A | 290 | 250 - 290 | No | Runoff/leaching of natural deposits |

UNREGULATED SUBSTANCES¹

| Substance (Units) | Year Sampled | Highest Amount Detected | Range (Low-High) | Typical Source |
|----------------------------|--------------|-------------------------|------------------|--|
| Bromoform (ppb) | 2016 | .58 | ND – 0.58 | By-product of drinking water disinfection |
| Chloroform (ppb) | 2016 | 62 | 3.2 – 62 | By-product of drinking water disinfection |
| Dibromochloromethane (ppb) | 2016 | 4.1 | 2.0 – 4.1 | By-product of drinking water disinfection |
| Bromodichloromethane (ppb) | 2016 | 16 | 5.0 – 16.0 | By-product of drinking water disinfection |
| Sodium ² (ppm) | 2016 | 70 | 33 - 70 | Erosion of natural deposits and road de-icing agents |
| 1,4 Dioxane (ppb) | 2016 | .068 | N/A | Stabilizer for chlorinated solvents |

Unregulated Contaminant Monitoring Rule 3 (UCMR3)¹

| Contaminant | Year Sampled | Highest Amount Detected | Range (Low – High) | Sources |
|---------------------------|--------------|-------------------------|--------------------|---|
| Vanadium (ppb) | 2014 | 0.3 | ND – 0.3 | Naturally occurring element metal |
| Chlorate (ppb) | 2015 | 240 | 82 – 240 | Agricultural defoliant. Drinking water disinfectants. |
| Chromium (ppb) | 2015 | .4 | .2 – .4 | Erosion of natural deposits. Steel or pulp mills. |
| Hexavalent Chromium (ppb) | 2015 | 0.23 | .08 – .23 | Naturally occurring used in making steel and alloys |
| Strontium (ppb) | 2015 | 160 | 120 - 160 | Naturally occurring element |
| 1, 4, Dioxane (ppb) | 2015 | 0.1 | ND – 0.1 | Stabilizer for chlorinated solvents |

¹Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the U.S. EPA in determining their occurrence in drinking water and whether future regulation is warranted.

²Sodium sensitive individuals, such as those experiencing hypertension, kidney failure or congestive heart failure should be aware of the sodium levels where exposures are being carefully controlled. The Massachusetts Office of Research and Standards has established a guideline of 20 ppm for sodium.

³LRAA – Locational Running Annual Average

⁴Running Annual Average

Source Water Assessment

The Massachusetts Department of Environmental Protection has completed a Source Water Assessment and Protection (SWAP) report for the Town of Walpole's water supply. The report contains information relative to land uses in the water supply areas of both the Mine Brook and School Meadow Brook aquifer wells, which are highly susceptible to potential contaminants. It also contains several recommendations including the use of best-management practices and the performance of regular watershed inspections. These recommendations are being addressed through annual sanitary surveys of the aquifer's areas and the management of storm water discharges. As a member of the community, you can assist by limiting the use of pesticides and fertilizers on your lawn and by properly disposing of hazardous household chemicals. Anyone who wishes to read the report in its entirety may do so by visiting the water or health department offices located in the Town Hall or by going online at www.mass.gov/dep/water/drinking/3307000.pdf. For more information call the Walpole Water Department at (508) 660-7309

Water Testing Performed in 2016
By the Town of Walpole Water Department

Substances that Could be in Water

To ensure that tap water is safe to drink, the Department of Environmental Protection (Department) and the U.S. Environmental Protection Agency (U.S. EPA) prescribe regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife; Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; Pesticides and Herbicides which may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses; Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and which may also come from gas stations, urban storm water runoff, and septic systems; Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791

Quality First

As we enter our 122nd year of providing public water service, we are once again proud to present our annual water report. As in years past, we are committed to delivering the best-quality drinking water possible and remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and demand management.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions or concerns, we are always available to assist you.

The Walpole Water Department is located at the Town Hall, 135 School St. For more information regarding hours of operation, the content of this report, or any other questions related to your drinking water, please call Rick Mattson, Superintendent of Sewer and Water, at (508) 660-7309.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

Community Participation

The Board of Sewer & Water Commissioners holds regularly scheduled meetings on the second and fourth Monday of each month. Those who wish to attend or participate in the meetings should look for postings in the Town Hall, on the website, or call the secretary for details at (508) 660-7309. The public is invited to attend all meetings.

Lead and Drinking Water Educational Statement

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Where Does My Water Come From?

The water supply for the Town of Walpole consists entirely of groundwater, which is drawn from two underground water formations called aquifers. These aquifers were created thousands of years ago at the end of the Great Ice Age.

The School Meadow Brook Aquifer, located in the southern section of town, has ten wells. The Mine Brook Aquifer, located in the west-northwestern section of town has four sets of operational wells.

As an alternative source of water, Walpole has interconnections with the towns of Foxboro and Norwood. These connections which are located on Washington Street, Water Street, and Union Street, have not been used in recent years; however, they are maintained on a regular basis to ensure their availability if needed.

Outdoor Water Tips and Facts

If you step on your lawn and the grass springs back, it does not need to be watered.

The best time to water is early morning (4 am to 7 am). You can lose as much as 30% of water to evaporation by watering midday.

An irrigation system should be checked each spring before use to make sure it was not damaged by frost.

POSTAL PATRON
WALPOLE, MA

Town of Walpole Water
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2016 WATER QUALITY ANNUAL REPORT



2017 MANDATORY WATER DEMAND MANAGEMENT POLICY

Effective May 1, 2017 all outdoor water use shall be in accordance with the following policy.

Lawn Watering/New or Established Lawns

Properties with odd numbered addresses will be allowed to water their lawns on Mondays and Thursdays.

Properties with even numbered addresses will be allowed to water their lawns on Tuesdays and Fridays.

Lawn watering between the hours of 9:00 AM and 5:00 PM on any day is prohibited.

***The use of sprinklers of any kind, for any reason outside of the timeframes outlined above is not allowed.**

OTHER OUTDOOR WATER USE (Excluding Lawn Watering)

The following outdoor water uses may be performed on any day or time with a **handheld** hose equipped with a spring loaded nozzle or watering can.

- Watering of vegetable and flower gardens
- Watering of ornamental shrubs and/or trees
- Car washing/power washing of buildings
- Pool filling

This policy is **MANDATORY** and shall remain in effect until Monday, October 2, 2017. Violators of this policy are subject to fines or other enforcement actions as determined by the Board of Sewer & Water Commissioners.

While this policy may initially be sufficient to manage the increased seasonal demand, more stringent measures and water use restrictions up to and including a total ban on outside water use may need to be imposed should conditions warrant.

*Special Note:

It is strongly suggested that extensive landscaping such as seeding, reseeding or sodding of lawns not take place during the timeframe of this policy as **no waivers** to the policy will be granted.

We regret any inconvenience that the implementation of this policy may cause and thank you for your anticipated cooperation and assistance in preserving our water supply.

"When the well is dry, we learn the worth of water"
Benjamin Franklin